

Appl. No. 10/615,704
Art Unit: 3725

- 1 -

Attachment B-2
Arguments

Claim Amendments

Claims 1, 14, 15, 18, 22, 24 and 29 are amended. Claims 13, 26, 27 and 30 are cancelled. Claims 2-12, 16, 17, 19-21, 23, 25, 28, 31 and 32 remain pending as previously presented. A new claim 33 is presented. Claims 1-12, 14-25, 28-29 and 31-33 are pending. The Applicants submit that no new matter is added by these amendments. Amended claims 1 and 24 are supported by canceled claims 13, 26 and 27, Figs. 3 and 4, and paragraphs 0053-0055, and 0074 of the specification. Claim 33 is supported by paragraphs 0053 and 0074 of the specification.

Rejection of Claims on Formal Matters

Claims 13, 29 and 30 were rejected as being indefinite. Claims 13 and 30 have been cancelled. The dependency of claim 29 has been amended. The Applicant submits that the claims, as amended, are not indefinite.

Rejection of Claims Over Prior Art

All of the machine claims, 1-23, were rejected over Archer '284 alone or in combination with other references. Claim 1 has been amended to specify a heating unit located on the opposite side of the bending tool from the feeder. Archer does not disclose this feature, nor suggest any need for it. In relation to claim 13, the Office Action notes that Romanov '650 discloses a heating unit 53 and suggests that it would be obvious to provide the heating unit taught by Romanov on the Archer device to facilitate bending. However, the heating unit 53 of Romanov is not located on the opposite side of a bending tool from a heater. Accordingly, a combination of the Archer and Romanov devices still would not provide the claimed invention. Further, the Romanov device uses a slewing table and a process in which a pipe gradually passes through an inductor 53 to be heated and simultaneously bent as advancement of the pipe causes the slewing table to rotate (column 6, line 48 to column 7, line 4). Such an apparatus and process is unsuitable either for combination with the device of Archer or for location of a heating unit on the opposite side of a bending tool from a feeder.

As stated in paragraph 0068, the claimed invention enables the use of many heater configurations. Furthermore, the Examiner's cited art describes machines that heat material as it is being fed to a bending head, that is, the heating unit is upstream of the bending head. Claim 1 now specifies heating downstream of the bending head. This gives two unobvious advantages in a device used to create upholstery cutting dies, despite the

Appl. No. 10/615,704
Art Unit: 3725

- 2 -

Attachment B-2
Arguments

complications it causes by requiring material to be frequently retracted. First, a nick (in the sense of item 22 shown in Fig. 1b, and not in the sense of a cut out as the word is used in some of the prior art) requires heat to form the nick but, once formed, will not pass through a bending head. Having a heater, used to aid in bending the material, downstream of the bending head requires the material to be retracted after heating before bending, but allows a single heater to be used for both bending and nicking. Also, as shown in Fig. 1a, a die may have two sharp bends very close to each other. The bends may be closer to each other than the smallest practical distance between the bender/nicker. Having the bender upstream of the heater would sometimes require heating two locations on the material before feeding the first location to the bender since, once the first location is bent, you could not pull the material back to the heater to heat the second location. Having the heater downstream of the heater allows the processing software to deal with each bend in sequence, without having to scan for second locations that might need heat before sending a first location to the bender. These advantages are not stated directly in the specification, but are fairly derivable from paragraphs 0054, 0055 and 0073. Paragraph 0073, for example, mentions that a nick might be very close to a bend.

Similarly, none of the other cited references anticipate or make claim 1 obvious. All of claims 2-12 and 14-23 incorporate at least the elements of claim 1. For these reasons, the Applicant submits that claims 1-12 and 14-23 are allowable.

All of the process claims, 24-32, were also rejected over Archer '284 alone or in combination with other references. Claim 24 has been amended to specify that in one or more of the repetitions of step a) through d), the material is advanced past the bending tool to a heating unit for heating and then retracted towards the bending tool prior to bending the material. Archer does not disclose this step. Romanov '650 was discussed in the Office Action in relation to claim 27 but also does not disclose this step. In contrast, in Romanov a pipe is simultaneously advanced, heated and bent (column 6, lines 61-64). The Applicant submits that Romanov's use of this process is related to the use of a slewing table 10 and so would not be obvious to combine with the process in Archer, particularly since Archer does not suggest a need for heating. Further, the Romanov process does not provide any step of advancing material past a bending tool to a heating unit nor retracting the material. In contrast, the heating unit 53 in Romanov is located either in or before the bending tool and the material is never retracted. Accordingly, even if Archer and Romanov were combined, they would still not produce the invention of claim 24. Similarly, none of the other cited references disclose or make obvious the invention of claim 24. All of claims 25, 28-29

Appl. No. 10/615,704
Art Unit: 3725

- 3 -

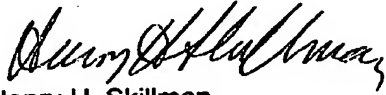
Attachment B-2
Arguments

and 31-33 contain at least all of the elements of claim 24. Accordingly, the Applicant submits that claims 24, 25, 28-29 and 31-33 are allowable. The unobvious advantages of the method of claims 24, 25, 28-29 and 31-33 are the same as those discussed in connection with the apparatus of claims 1-12 and 14-23.

The Applicant submits that the remarks above obviate the need to comment on various other statements in the Office Action and the Applicant does not admit the truth of any of those statements. However, in relation to the word "nicking", the Applicant submits that the word "nick" in the present application refers to a structure capable of producing a marker notch in a product cut out using a die, for example as shown at 22 in Figure 1b and discussed at paragraph 0045. Element 8 in Mizukawa '264 and elements 21, 22 in Yamada '887 do not produce a "nick" as that word would be understood by a person skilled in the art reading the current application.

Respectfully submitted,

Wesley SCOTT

By 
Henry H. Skillman
Reg. No. 17,352
Tel: 215-563-4100